

Five Years of Centralized Research Support at Geological Survey of Finland (GTK)

Ulrika Backman, Tamara Bar-Magen, Marjo Kilpijärvi, Karoliina Koho and Aku Heinonen
Research Service Days, Tampere
August 2025

Geological Survey of Finland Is an Expert in Geological Resources



Key figures

Founded in **1885**

300+ ongoing research projects

450 experts

250+ customers

120+ peer-reviewed scientific publications

74 % cooperation with GTK has led to new innovations, solutions, or practices*

Research agency operating under the Ministry of Economic Affairs and Employment



international project activities on all continents

In **6** locations in Finland

Strategy 2024–2027

Technological innovations

Raw material and material self-sufficiency

Carbon sinks

Carbon-neutral energy

Environment

Solutions to accelerate the transition to a sustainable, carbon-neutral world

Our focus areas

Availability of Critical Raw Materials
Circular Economy of Minerals

Geophysical Applications
Geoscience Information Solutions

Energy Transition
Geoenvironment
Sustainable Water Resources

Customer solutions

Science and innovations

Geoscience information

For Earth and for Us

We strengthen the human-focused working life

Coaching culture

Smooth and meaningful work

Constantly developing skills

Cross-border collaboration and communication

We utilise technology and AI

We expand the financial base

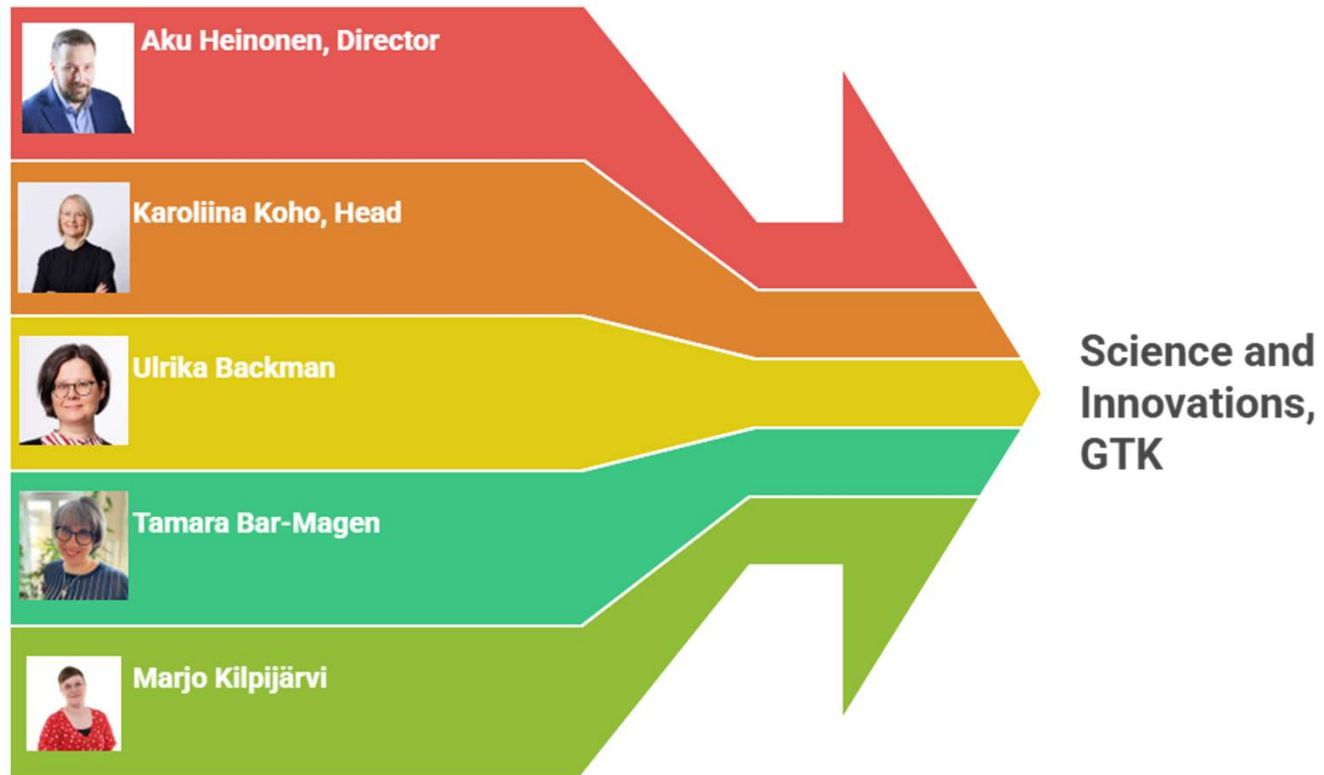
Bravely curious and innovative

More together

Appreciative and responsible



Research Management Office





SCIENCE & INNOVATIONS Team



SUPPORTS

researchers in developing and writing research proposals aimed at external funding sources.



FACILITATES

early knowledge of funding opportunities and elucidates prospective funding.



ADMINISTERS

the application processes of internal S&I development funding.



GUIDES

the development and integration of S&I competencies, capabilities, and tasks into the workflow of scientific staff.



COMMUNICATES

with research funders.



PROVIDES

preliminary analysis and advice pertaining to innovation processes.



ADVISES

on research integrity issues.



ASSISTS

in the long-term strategic development of research on a unit, team, and individual level.



OVERSEES

the publications and publication policy of GTK.



REVIEWS

research metrics and processes and communicates statistics of research output.



ENABLES AND IMPROVES

scientific discourse and dissemination of ideas and information within and outside GTK.



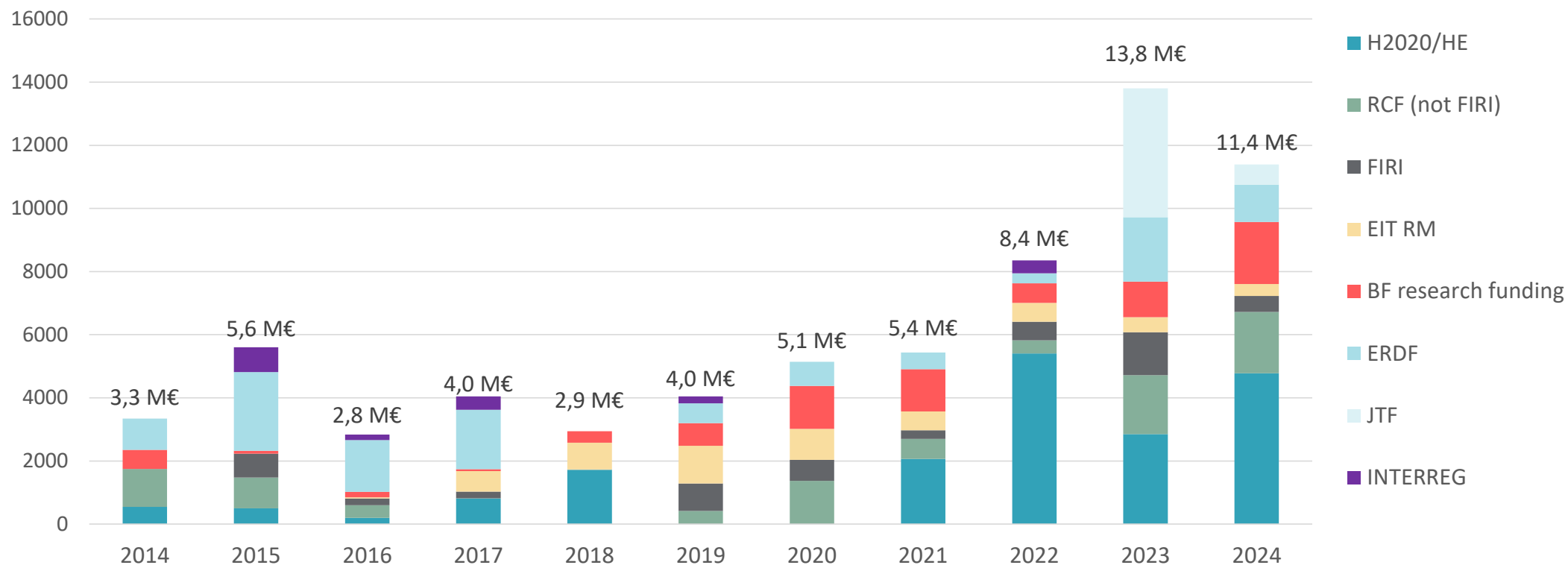
COORDINATES

higher education collaboration and informs researchers and supervisors about new opportunities and news from the academia.

Research Funding

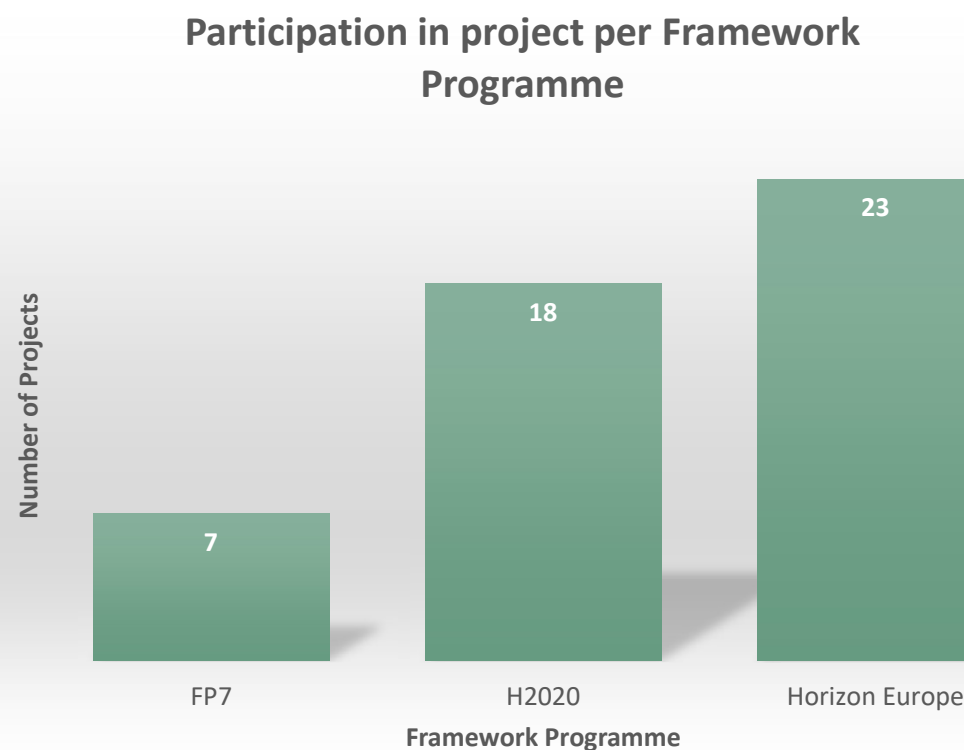
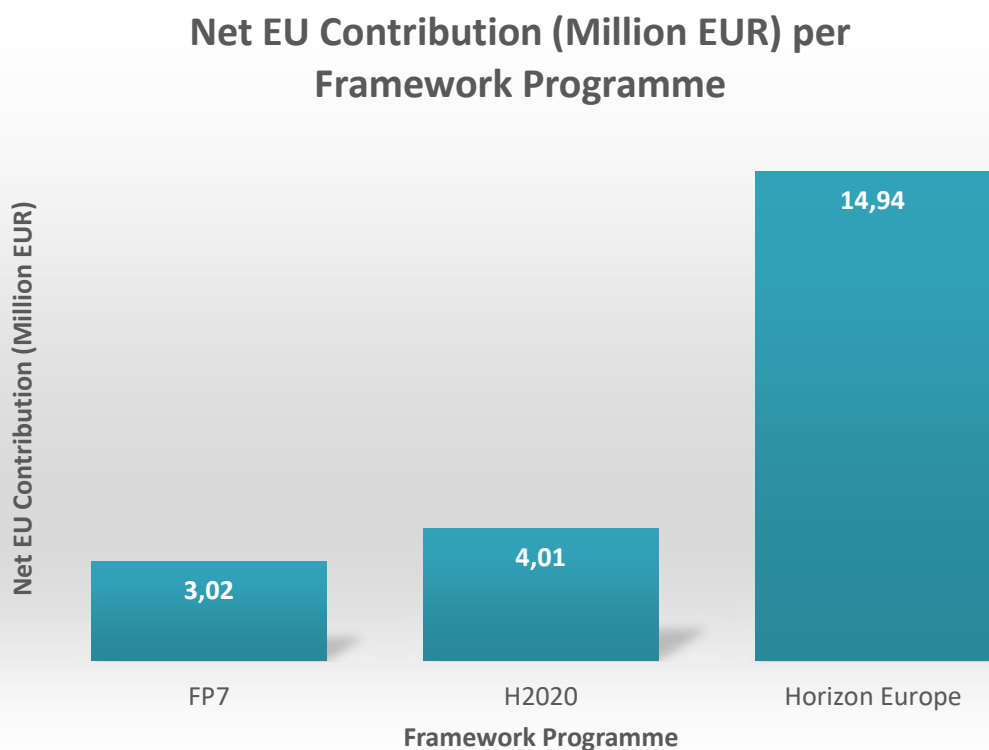
Research Funding 2014-2024

Annual acquisition of co-financed project funding (k€)



Sources: Participant portal, AKA SARA system, BF

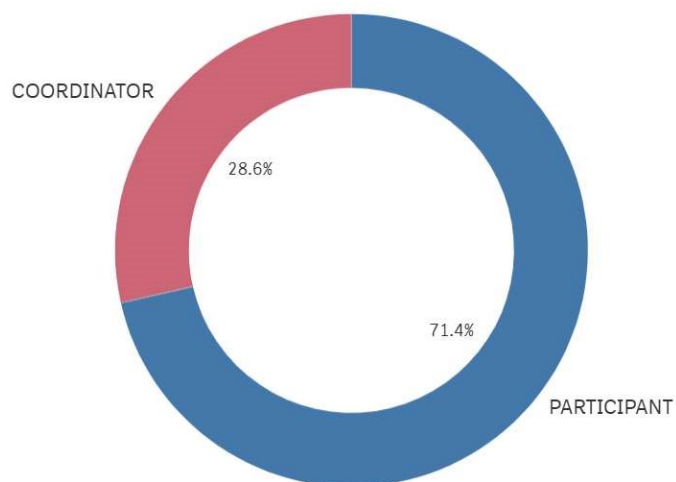
Participation of GTK in the latest Framework Programmes



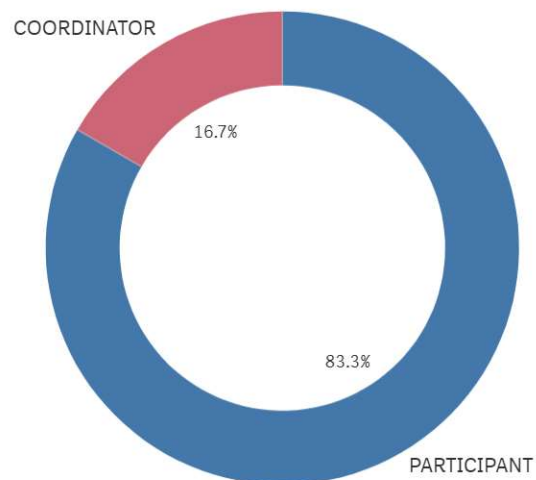
Sources: Participant portal

Coordinate projects- a significant share of our involvement

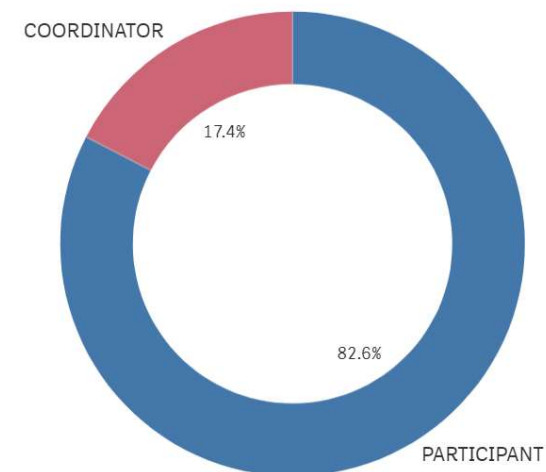
FP7



H2020



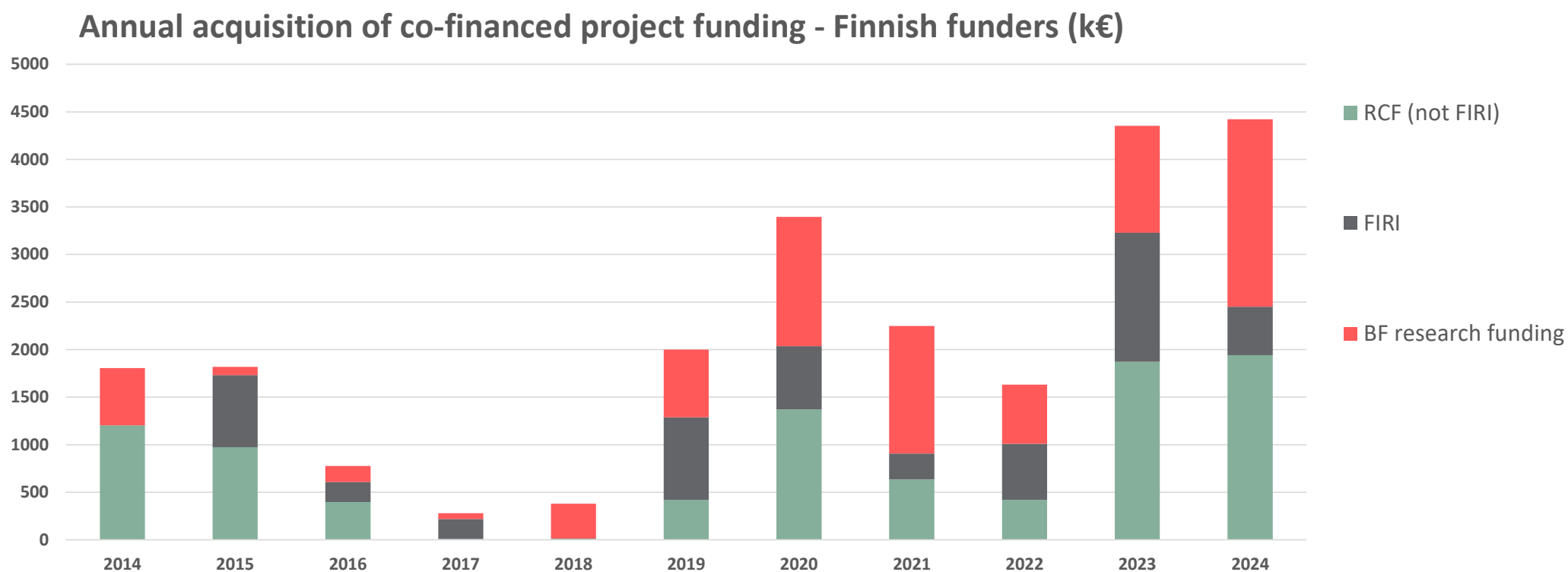
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Sources: Participant portal

15.8.2025

GTK's Acquisition of Research Funding – RCF and BF



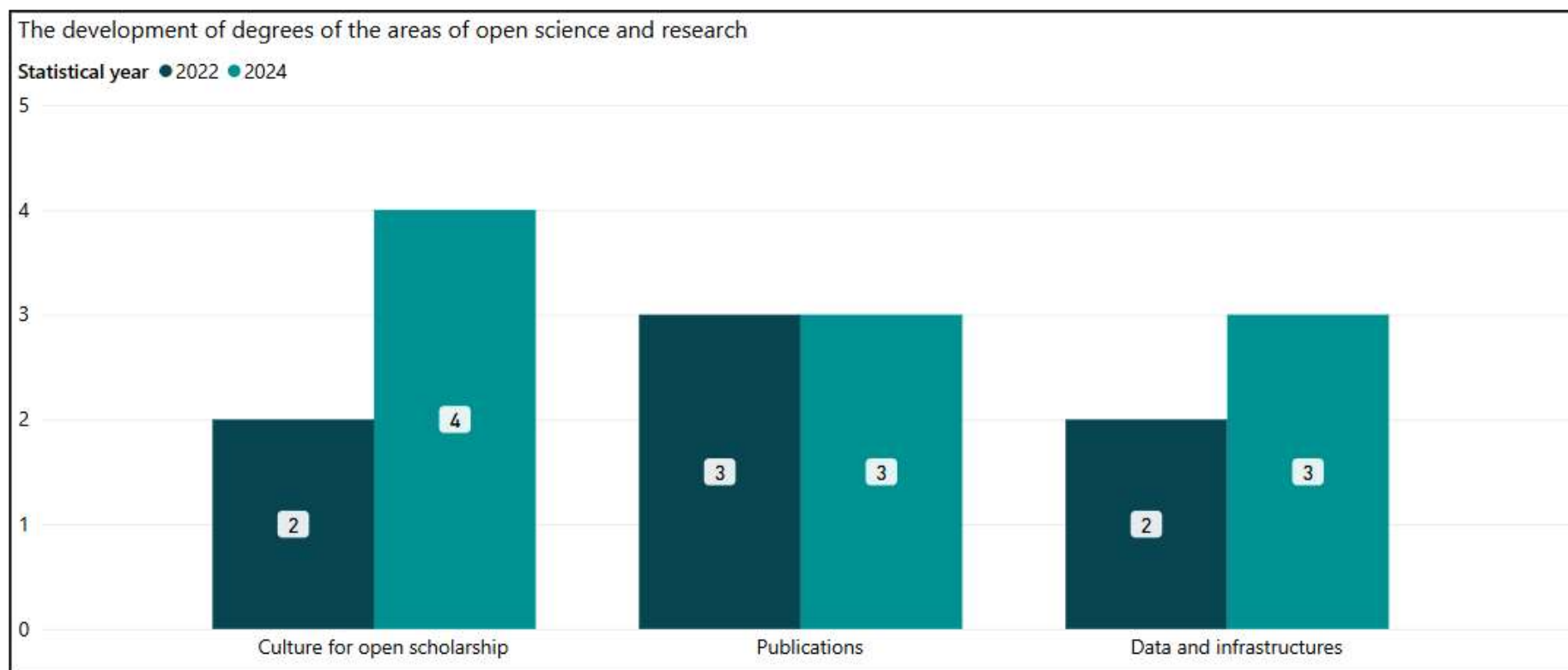
Sources: AKA SARA system,

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10

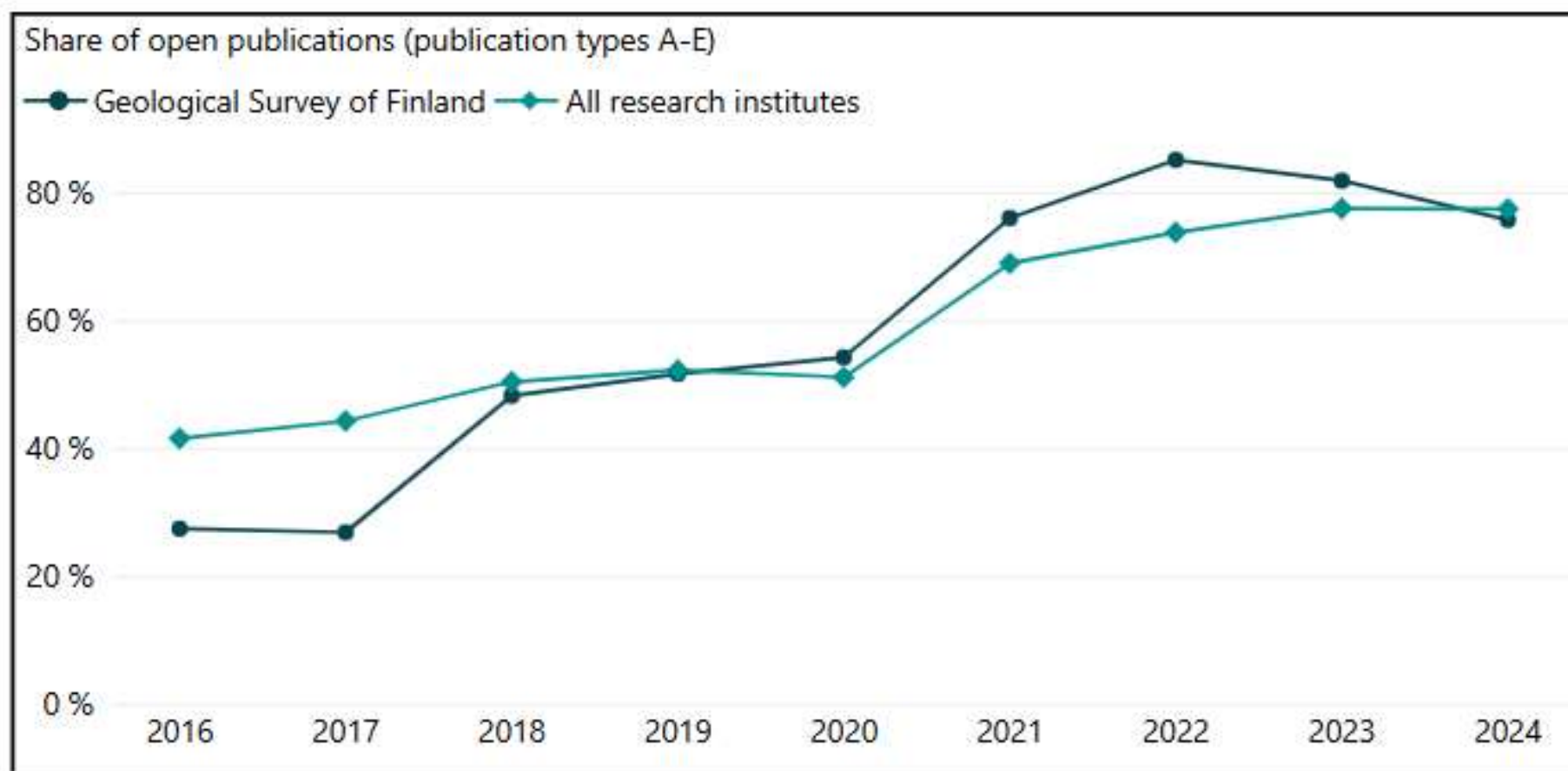
Open science

Open Science



Source: [Geological Survey of Finland - Research.fi](https://research.fi)

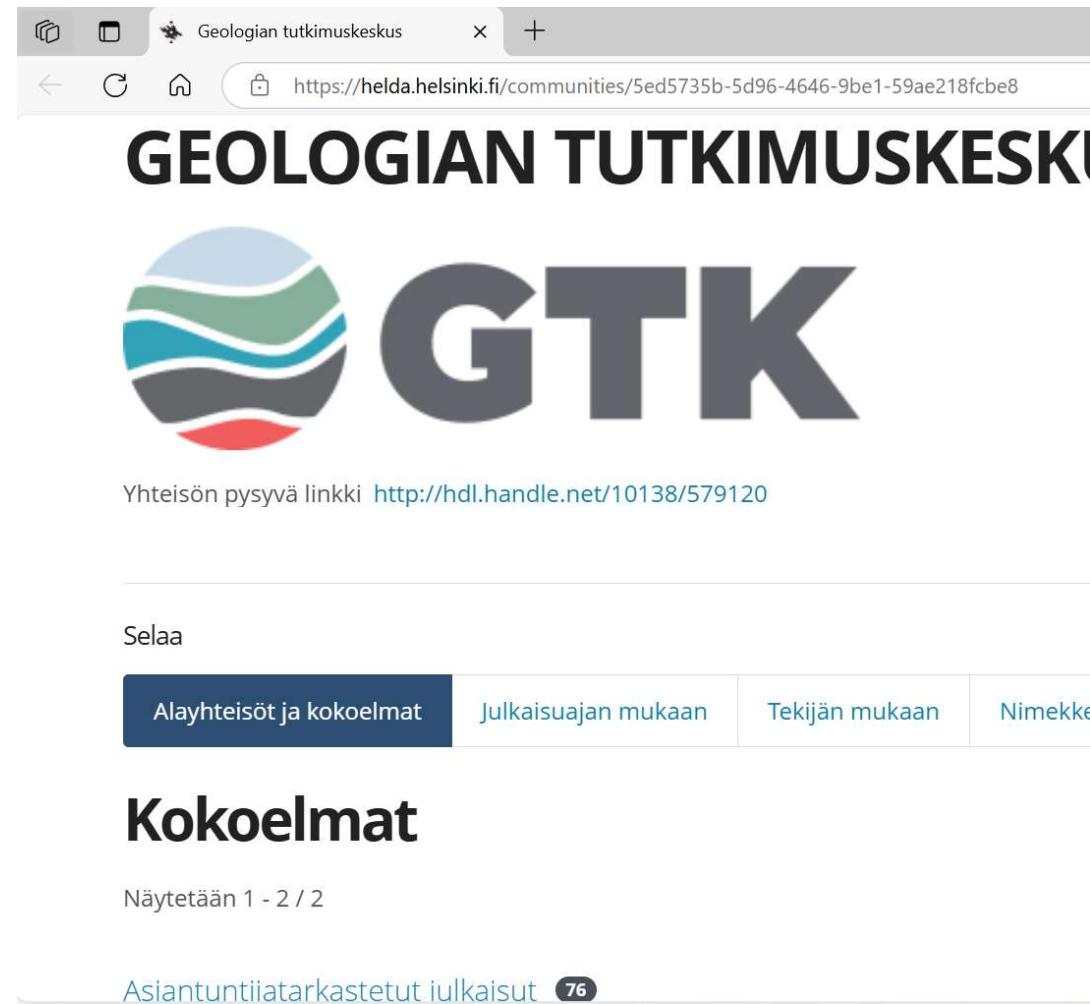
Open access to publications



Source: [Geological Survey of Finland - Research.fi](https://research.fi) 15.8.2025

Recently implemented and upcoming initiatives


- GTK joined HELDA in beginning of 2025
 - *To make it easier to comply with funders' requirements on open access of publications*
 - *Increase in share of open access publications to be expected*
- Open science development programme to start during the fall with goal of establishing an open science policy for GTK and to strengthen the internal culture of openness



Geologian tutkimuskeskus

https://helda.helsinki.fi/communities/5ed5735b-5d96-4646-9be1-59ae218fcbe8

GEOLOGIAN TUTKIMUSKESKUS



GTK

Yhteisön pysyvä linkki <http://hdl.handle.net/10138/579120>

Selaa

Alayhteisöt ja kokoelmat Julkaisuajan mukaan Tekijän mukaan Nimekkeen mukaan

Kokoelmat

Näytetään 1 - 2 / 2


[Asiantuntijatarkastetut julkaisut](#) **76**

Weaving Networks for Research

GTK's Collaboration Infrastructure for Policy Advancement




Policy briefs published during spring 2025




Geoinformation Exploration Management

Current and high-quality geoscientific data such as climate change, surface and urban planning. Available that enables data-driven decision making and use of geology highlight key priorities for a data-driven geoscience, the




Geosciences Management Environment

Global environmental challenges and new ways of thinking about sinks, geo-biodiversity, and sustainable land use practices




Locating Natural Resources the Earth Depends

The importance of geophysics is rapidly growing layers are needed to find critical raw materials. Only geophysics can look into the Earth beyond the surface. Finland must have strong geophysical research capabilities.




Geosciences Provide for the Energy Transition

The shift in energy production infrastructure towards multiple sectors. Geological research is playing a key role in the use of geothermal energy, identifying new sources of hydrogen, and ensuring required infrastructure storage, and safe nuclear waste disposal sites.




Advancing Circular Economy Geosciences

The shift to sustainable energy, a more efficient and responsible engineering are essential in scaling processing solutions, enhancing design-driven circularity in mineral stewardship of our finite mineral resources, the supply of critical materials.




Geosciences Provide for Sustainable

Climate change and pollution are increasing the management of water resources more geoscience – plays a vital role in ensuring responsible industrial water practices. Making, we can better address current and growing global demand for clean water.



Ensuring the Availability of Critical Raw Materials: A Strategic Priority for EU and Finland

Achieving climate goals and developing technologies require large quantities of mineral resources and metals. Critical raw materials are needed in, for example, the realisation of renewable energy, digital industry, and space and health technology. Up-to-date geological research on mineral deposits and value chains is of critical importance, enabling clean transition and securing the responsible supply of materials.




Economic resilience and technological advancement – based on geoscientific expertise

The availability of critical raw materials (CRMs) underpins Finland's economic resilience and technological advancement. To maintain leadership in critical raw materials research, it is vital to

- improve exploration potential,
- deepen the understanding of Finland's mineral systems, and
- secure high-quality geodata.

Collaboration with international partners and the private sector is key to overcoming current challenges. By focusing on these strategic areas, Finland can secure its position in the global value chain.



What are critical and strategic raw materials?

Different actors, e.g. EU and NATO, have their own lists of critical and/or strategic raw materials. The EU has identified critical raw materials that are of high economic importance to Europe and carry a high risk of supply disruption. The regulation names a total of 34 critical raw materials, of which 17 are also strategic. Strategic raw materials are essential for the green transition, digitalisation, and defence industry needs.

See also presentation by Karoliina Koho et al

13:00-14:30

Designing Researcher Development Path to Empower Competence Growth and Strategic Alignment in a Research Organization

Karoliina Koho, Suvi Vesterinen, Marjo Kilpijärvi, Elina Heininen & Aku Heinonen, Geologian tutkimuskeskus GTK

Sessio on englanniksi

Kesto 20 min

Taso: "Aloittelija" (ei vaadita aiempaa tietoa)

Olemme kehittäneet GTK:ssa uuden käsitteellisen viitekehyksen tukemaan systemaattisesti tutkijoiden osaamisen kehittämistä– Tutkijan kehityspolun. Määrittelemällä selkeät, joustavat kehityspolut ja sisällyttämällä tukimekanismit, viitekehys pyrkii paitsi parantamaan tutkijoiden taitoja ja kyvykkyyksiä, myös tarjoamaan heidän esihenkilöilleen paremman näkemyksen tiimiensä kehitystarpeista ja strategisesta suuntautumisesta. Tässä esityksessä jaamme viitekehyksen taustalla olevan perustelun, sen keskeiset osat ja ensimmäiset havainnot sen toteutuksesta.

15.8.2025

FOR EARTH AND FOR US

The Geological Survey of Finland (GTK) produces impartial and objective research data and services in support of decision-making in industry, academia, and wider society to accelerate the transition to a sustainable, carbon-neutral world. GTK employs more than 400 experts specializing in the mineral economy, circular economy, solutions related to energy, water and the environment, as well as digital solutions. GTK is a research institution governed by the Finnish Ministry of Employment and the Economy, operating in Finland and globally.
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[Youtube.com/c/GeologiantutkimuskeskusGTK](https://www.youtube.com/c/GeologiantutkimuskeskusGTK)

